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THESIS

MULTIYEAR CONTRACTING FOR NON-MAJOR WEAPON SYSTEMS

by

Cary D. Johnson

March, 1996

Principal Advisor: Rebecca J. Ramsay

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MULTIYEAR CONTRACTING FOR NON-MAJOR WEAPON SYSTEMS

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Lieutenant, United States Navy
B.B.A., University of Texas at Arlington, 1985

Submitted in partial fulfillment
of the requirements for the degree of

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ABSTRACT

The focus of this thesis is to determine the use of multiyear contracting for purchasing non-major weapon systems. The intent of this research is to analyze long-term procurement of supplies and equipment, specifically valves, pumps and compressors. The purpose of the study is to determine the level at which multiyear contracting procedures are used to acquire supplies and equipment. The study will determine factors which promote or restrict the utilization of multiyear contracts. Surveys and interviews were used to assess the use of long-term procedures for buying supplies. The conclusion indicates that multiyear contracting is limited when purchasing repair parts for weapon systems, and there are alternative methods used to procure repair parts on a long-term basis. Recommendations include making policy and procedural changes to promote the increased usage of multiyear contracts, and implementing programs to market the benefits of long-term contracting, especially multiyear contracting.

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I. INTRODUCTION

A. BACKGROUND

Multiyear procurement is a method of acquiring up to five years' requirements of systems, subsystems, components, or supplies with a single contract. Contracting officers were encouraged to use multiyear contracting because of benefits/savings to the Government. Federal Acquisition Regulation (FAR) Subpart 17.1 list objectives which can be viewed as benefits from using multiyear contracting. These objectives are as follows:

- Lower cost
- Enhancement of standardization
- Reduction in administrative burden
- Substantial continuity of production or performance reducing cost normally incurred by annual contracting
- Stabilization of a contractor workforce
- Avoid new contractor certification
- Broaden competitive base
- Provide productivity incentives

There have been numerous studies and research literature on multiyear contracting for major weapon systems since the inception of multiyear procurement in the early 1960's. Information held in the Defense Logistic Studies Information Exchange (DLSIE) data base, Table 1.1, indicated more than one hundred studies were conducted up to 1994. Multiyear contracting has proven to be an effective method for procuring major weapon systems. From

1985 to 1991, 62% of the major weapon systems proposed for multiyear procurement were approved by Congress. However, there is little or no published literature on the use of multiyear contracting for non-major weapon systems such as parts and components, or supplies.

DLSIE RESEARCH STUDIES ON MULTIYEAR CONTRACTS				
Years	1960-69	1970-79	1980-89	1990-present
Studies	14	15	88	6

Table 1.1 Summary of published information on multiyear procurement.

Multiyear procurement was successful in its infancy because of "ease of use." Most purchasing activities used multiyear procurement to provide material support for recurring requirements. This avoided the hassles and problems of dealing with the annual budget process. By the late 1960's, multiyear procurement had been expanded to long term material and maintenance service contracts. As the use of multiyear procurement became more widespread among buying activities, Congress began placing restrictions on its use. Congress was concerned with its loss in budget flexibility and the potential for large unfunded obligations due to contract cancellation. [Ref. 1]

Multiyear procurement for supplies and services has been successful in the past and its utilization could be prosperous today for acquiring vital supply parts and components. The intent of this research is to determine the use of multiyear procurement for supplies throughout the buying community and analyze the advantages or disadvantages of the continued use of multiyear contracting or its lack of use.

B. RESEARCH OBJECTIVE

The primary objective of this research is to determine the use of multiyear contracting for the acquisition of non-major weapon systems. Multiyear contracting is often associated with the acquisition of major defense programs. While there are many benefits to Government and industry from utilizing multiyear procurement for major weapon systems, the same benefits should be realized for procuring supply parts and components, or non-major weapon systems. The purpose of this research is to determine the use of multiyear procurement methods for acquiring supply parts and components. Although there are literally thousands of parts and components procured daily by the Department of Defense (DoD), this analysis will constrict the research to determining the use of multiyear procurement for valves, pumps and compressors, in Federal supply classifications 43 and 48. If multiyear contracting is understood and using correctly, the Government can realize significant savings by effectively utilizing multiyear contracting procedures for all long term acquisitions, especially for non-major weapon systems.

C. RESEARCH QUESTION

The following primary research question will be used to direct and guide the objectives of this study:

What is the best way to apply multiyear contracting procedures for procuring non-major weapon systems, in particular valves, pumps and compressors?

This primary research question can be divided into more subsidiary research questions to facilitate a smoother analysis. The following subsidiary questions will be used in the study:

1) To what extent is multiyear contracting used for purchasing supplies and services at buying activities that require valves, pumps and compressors?
2) What are the problems associated with utilizing a multiyear contracting technique for non-major weapon systems procurement?
3) If multiyear contracting techniques are currently being used for procurement of supplies and services, what is the extent of its use?
4) Do better alternatives exist for procuring supplies and services for long-term requirements?

D. SCOPE, LIMITATIONS AND ASSUMPTIONS

The scope of this thesis is bounded by the use of multiyear procurement procedures for acquiring supplies and services. The research further restricts the analysis to the use of multiyear procurement for pumps, valves and compressors. There is numerous published material that relates to multiyear contracting for major weapon systems, however, information on multiyear procurement for supply parts and components is limited. This research will attempt to discover to what extent is multiyear procurement used to support supply parts requirements of DoD.

The limitations that should be considered for this research are the time periods covered, the small sample size from which responses are solicited, and the relatively small

population of procurement activities that will be surveyed. Although the Government has been buying supplies and services since its formation, procurement reform has only become a major issue within the past two decades. This research will focus on long-term procurement of supplies and services from the early 1980's after passage of Public Law 97-86. The act encouraged the use of long term procurement vehicles. DoD purchases thousands of repair parts daily through numerous buying activities. However, the number of buying activities applicable to long term procurement is very small. For long-term procurement to work effectively, buying activities must purchase large or stable quantities of requirements over a long period of time (usually exceeding one year but less than five years). Thus, the survey will be directed toward major stocking activities and inventory control points.

Many assumptions were made pertaining to this research topic. The first assumption was that all survey respondents were qualified or authorized to provide such information. The second assumption was that all answers provided were honest and unbiased. The third assumption was that readers and participants of this research topic are familiar with Government procurement procedures and practices.

E. METHODOLOGY

The methodology the researcher used consisted of a review of pertinent literature relating to multiyear contracting, and development of a questionnaire survey to solicit information from the major procuring activities which will support the research topic. A comprehensive literature review of multiyear contracting was developed with reports from the Naval Postgraduate School, the Defense Logistics Studies Information Exchange, the

Defense Technical Information Center (DTIC), and other applicable professional journals.

The survey solicited the major buying activities that procure pumps, valves and compressors. The questions will attempt to discover to what extent multiyear contracting techniques are being used to satisfy requirements for pumps, valves and compressors.

F. THESIS ORGANIZATION

This research effort consists of five chapters covering the following subject areas:

Chapter I is an introduction providing the rationale and objectives to be obtained in this study.

Chapter II presents information on multiyear contracting extracted from a comprehensive review of pertinent literature. The history, advantages, disadvantages and current policies pertaining to long-term procurement of supplies and services will be discussed.

Chapter III discusses the methodology used for this study and the rationale for the selection of questions.

Chapter IV will analyze and interpret the data collected for this study from completed surveys and the conclusions and recommendations derived from the data collected. The conclusion will focus on the best method of implementing multiyear procurement for non-major systems. Areas for further research will also be discussed.

G. CHAPTER SUMMARY

This chapter provided an overview of the purpose and objectives to be investigated in this study. Chapter II will provide a more in-depth review of research literature pertaining to multiyear contracting.

II. BACKGROUND

A. INTRODUCTION

Since the 1960's, there have been numerous studies and commission panels on acquisition reform. From the McNamara Initiatives (1961) to the Federal Acquisition Streamline Act (FASA) of 1994, Government has continually tried to reinvent the procurement process. The goals of the various studies and initiatives were to improve the efficiency of the federal procurement process and to realize some cost benefit/savings when purchasing weapon systems, supplies and services. To pursue Government's goal of an effective and efficient procurement system, federal agencies use several types of contracting vehicles to procure a multitude of requirements for their customers. For the purpose of this study, the researcher will focus on a special contracting method, multiyear contracting, and its use and applicability for acquiring various supplies, such as subassemblies, components, and spare parts.

B. HISTORY OF MULTIYEAR CONTRACTING

Multiyear contracting is not a new efficient, cost saving concept created and implemented by one of the latest procurement reform panels commissioned. Multiyear contracting methods have been used by the Federal acquisition community for several years. Multiyear procurement first emerged in the early 1960's, when the Army successfully used this contracting method to procure supplies for base support. Eventually, activities began using multiyear contracting methods for processing major equipment, from trucks to flamethrowers.

By the late 1960's, agencies began using multiyear procurement for major systems, long term material contracts, and maintenance service contracts. The agencies realized success both in the area of savings and in the low frequency of cancellations during this period. By 1970, the Navy implemented the use of multiyear contracting procedures as part of a Total Product Procurement (TPP) initiative. The Navy's use of TPP for two vessels (DD-963 and LHA-1) marked a major turning point in the use of multiyear contracting methods as a contractual vehicle. Due to disagreement between the Navy and contractors over late deliveries, unit price charges, and various other claims, the Navy canceled the LHA contract in 1972, resulting in a cancellation fee of 109.7 million dollars. Congress, infuriated by the enormous amount of the cancellation fee, began passing legislative actions which significantly curtailed the use of multiyear contracting within the Department of Defense. [Ref. 2:p 1-2] During the next decade, defense spending and in particular, multiyear procurement were significantly reduced due to budget constraints and requirements to qualify programs for acquisition using multiyear procurement methods.

C. DEFINITIONS

The Federal Acquisition Regulation subpart 17.1, defines the following terms as they apply to this research topic:

1. Advanced Acquisition

An exception to the full funding policy which allows acquisitions of long lead-time items (advanced long lead acquisition) or economic order quantities (EOQ) of items in a fiscal

year in advance of that in which the related end item is to be acquired. This may include materials, parts, and components as well as associated costs.

2. Annual Funding

The current Congressional practice of limiting authorizations and appropriations to one fiscal year at a time.

3. Cancellation

Cancellation of the total requirements of all remaining program years. Cancellation results when the contracting officer (a) notifies the contractor of the nonavailability of funds for contract performance for any subsequent program year, or (b) fails to notify the contractor that funds are available for performance of the succeeding program year requirement.

4. Cancellation Ceiling

The maximum amount that the Government will pay the contractor which the contractor would have recovered as a part of the unit price, had the contract been completed. The amount which is actually paid to the contractor upon settlement for unrecovered costs (equal to or less than the ceiling) is referred to as the cancellation charge. The ceiling may include recurring and non-recurring costs.

5. Multiyear Contracts

Contracts covering more that one year's, but not in excess of five year's requirements,

unless otherwise authorized by statute. Total contract quantities and annual quantities are planned for a particular level and type of funding as displayed in a current five year development plan. Each program year is annually budgeted and funded and, at the time of the award, funds need only to have been appropriated for the first year.

6. Multiyear Funding

Congressional authorization and appropriation covering more than one fiscal year. The term should not be confused with two year or three year funds which cover only one fiscal year's requirement but permit the Executive branch more than 1-year to obligate the funds.

7. Non-recurring Costs

Production costs which are generally incurred on a one time basis, such as plant or equipment relocation, plant rearrangement, special tooling and special test equipment, preproduction engineering, initial spoilage and rework, and specialized work force training.

8. Option

Unilateral right in a contract by which, for a specified time, the Government may elect to purchase additional supplies or services called for by the contract, or may elect to extend the term of the contract, options are considered a special contracting method.

9. Part

A part, repairable or consumable, purchased after provisioning of that part for: replacement; replenishment of stock; or use in the maintenance, overhaul, and repair of equipment such as aircraft, engines, ships, tanks, vehicles, guns and missiles, ground communications and electronic systems, ground support and test equipment. The term part includes subassemblies, components, and subsystems [Ref. 3: Appendix E].

10. Recurring Costs

Production costs that vary with the quantity being produced such as labor and materials.

11. Termination for Convenience

As contrasted with cancellation, a termination for convenience can be effected at any time during the life of the contract (cancellation is effected between fiscal years) and can be for the total quantity or a partial quantity (whereas cancellation must be for all subsequent fiscal years' quantities).

D. MULTIYEAR OBJECTIVES

The emphasis on the development of multiyear contracting is to implement a procurement strategy to improve the process of procuring weapon systems and to reduce the procurement cost of such weapon systems. Federal Acquisition Regulation subpart 17.1 lists objectives for the use of multiyear procurement methods. These objectives are intended to

guide procurement officials' decisions for selecting weapon systems to purchase using multiyear contracting. Successful programs selected for multiyear procurement should be applicable to the following objectives:

- Lower cost.
- Enhancement of standardization.
- Reduction in administration burden.
- Substantial continuity of production or performance, reducing costs normally incurred by annual contracting.
- Stabilization of contractor workforce.
- Avoidance of requirement for new contractor quality assurance certification.
- Broadened competitive base.
- Productivity incentives to contractors through investment in capital facilities, equipment and advanced technology.

FAR lists five criteria that must be met when considering candidate programs for the use of multiyear procurement methods. The eventual success of a program selected for multiyear procurement is significantly improved when all aspects of the program can accommodate each criterion. The criteria written in the FAR were originally published in a memorandum, issued in May 1981 by the Secretary of Defense, Frank C. Carlucci, entitled "Policy Memorandum on Multiyear Procurement" [Ref. 4:p 46]. These criteria were the foundation adapted by Congress as part of the Department of Defense Appropriation Act of 1982 (PL 97-86). The Carlucci memorandum lists the following six criteria, whereas the FAR only lists five: [Ref. 5]

- Benefit to the Government. A multiyear procurement should yield substantial cost avoidance or other benefits when compared to conventional annual contracting methods. Multiyear procurement with greater risk to the Government should demonstrate increased cost avoidance or other benefits over those with lower risk. The savings can be defined as significant either in terms of absolute dollars or percentage of total cost.
- Stability of requirement. The need for the item is expected to remain unchanged or vary only slightly, during the contract period in terms of production rate, fiscal year phasing, and total quantities.
- Stability of funding. Throughout the entire contracting period, there should be a reasonable expectation that the program is likely to be funded.
- Stable configuration. The program considered should be technically mature, (completed research, development, testing and evaluation with relatively few changes in item design anticipated), and the underlying technology should be stable. If changes occur, the estimated cost of such changes is not anticipated to drive the total cost beyond the proposed funding profile.
- Degree of cost confidence. Cost estimates for both contract costs and anticipated cost avoidance are realistic. Estimates should be based on a thorough market analysis, costs history on the same (or similar) item, or other proven cost estimating techniques.

- Degree of confidence in contractor capability. There should be confidence that the potential contractor can perform adequately, both in terms of government furnished items and their firm's capability.

E. MULTIYEAR CONTRACTS

1. General

Multiyear contracting is a special form of contracting where up to five years of known requirements may be placed at one time on a single contract. The funds for the total price of the contract do not have to be available at the time of the award. Only when using multiyear contracting procedures, a contracting officer can expend or obligate funds which have not been authorized and appropriated by Congress. Multiyear contracting provisions prevent violation of the Anti-Deficiency Act, 31 USC 665.

2. Procedures

After verifying that a proposed non-major weapon system has met the criteria for a multiyear contract, contracting officers may select negotiations or sealed bidding, including two-step bidding as a method of contracting. When issuing solicitations, the contracting activity must issue both a multiyear solicitation and also an one year solicitation for the first year requirement. Based upon the previous acquisition history of the requirement and the level of competition, contract awards may be made on price only or price and other related factors.

3. Cancellation

For multiyear contracting, all years except the first is subject to cancellation. Cancellation charges are activated when the remaining years in the contract are not funded by Congress. Cancellation charges represent non recurring costs that were incurred in the first year. If the contract was not canceled, the contractor would recover non recurring costs throughout the term of the contract, the costs would be included in the per unit price of all items. Recurring costs may or may not be allowed, it is at the discretion of the agency head. Cancellation ceilings are used in multiyear contracting to limit the cancellation liability of the Government. The Government contracting officer, calculates the ceiling based on possible cancellation costs in the remaining years of the contract. Termination charges are not the same as cancellation charges. If a multiyear contract is terminated, the Government is responsible for termination charges plus cancellation charges up to the cancellation ceiling. [Ref. 6:p. 17.1]

Table 2.1 provides clarification between multiyear and an one year contract.

ANNUAL YEAR AND MULTIYEAR CONTRACT COMPARISON		
Condition	Annual Contract	Multiyear Contract
Usage	General	Very Specific
Length	One Year	Two to Five Years
Liability	Termination Charge	Cancellation Charge
Cost over time	Smaller front end, Higher overall	Large front end, Lower overall

Table 2.1 [Ref. 7:p III-2]

4. Forms of Multiyear Contracts

A recent research study by a Naval Postgraduate School student briefly describes the various forms of multiyear contracts in the following excerpts [Ref 8:p. 17]:

There are many different forms and variations of multiyear contracting of which some are not available for Government use. The principal variables involved in the different forms of multiyear are whether or not the contract is fully funded, there is an allowance for advance buys, and a variation on the cancellation clause. Possible form's multiyear can take and the characteristics of each are as follows:

1) Fully Funded Multiyear Contract
   - -all funds appropriated at the beginning
   - -no cancellation charge
2) Fully Funded with Advance Buy
   - -labor and material funded in advance
   - -cancellation ceiling included non-recurring costs
3) Incremental Funded Multiyear Contract
   - -funded for one year
   - -advanced material not covered in cancellation ceiling
   - -cancellation ceiling funded for first year
4) Incremental Funded Advance Buy
   - -funding for one year
   - -cancellation funded for first year
   - -advance labor and material purchases covered
5) Multiyear with Funded Cancellation Ceiling
   - -funding set aside for entire cancellation liability
   - -no funding for advance buys
6) Multiyear with Unfunded Cancellation Ceiling
   - -no funding for cancellation liability
   - -no advance buys

Discussion of multiyear contracting usually involve a standard format that is funded either separately or incrementally by a named Congressional budget appropriation with the inclusion of a cancellation ceiling for at least the first year [Ref. 9:p 32].

F. ADVANTAGES/DISADVANTAGES OF MULTIYEAR CONTRACTING

1. Advantages

There are several benefits that can be realized when using multiyear contracting as a method of acquiring program requirements. Some of the major benefits are cost savings, industrial base enhancement, increased competition, improved production efficiencies, stabilization of the contractor's workforce, and improved mobilization preparedness.

One of the major benefits of long-term procurement is a cost savings. For example, GAO analysis of eleven annual year contracts revealed that a multiyear procurement of the subject items would have resulted in a price reduction of 7.8%, of the prior annual year contracts and a 9.9% reduction of price from the average of the two prior annual year contracts [Ref. 10:p 3]. Cost savings can be realized through reduced administrative costs associated with contract administration, annual solicitations, proposal preparations, and in some circumstances, negotiations with the contractors. Long-term contracts permit contractors to buy supplies in larger lot quantities at lower prices (economic order quantities), thereby, reducing procurement costs to the Government. Other benefits of long-term procurement are reduced costs by avoiding price escalations and limiting inflationary price increases.

Long-term contracting leads to better long range planning and forecasting for both, Government and industry. Multiyear procurement allows managers to exercise more sound management practice which minimizes workforce instability and improves the learning curve benefits/savings from a continuous production run. This also leads to enhancement of the

industrial base. Production efficiencies are enhanced through long-term procurement. Long-term commitments encourage contractor investment in more efficient new equipment. Production quantities and product quality are improved because of better equipment and stability in the workforce. Long-term contracts improve production by allowing manufacturers to standardize their production and manufacturing processes, thus reducing overall cost.

Multiyear procurement tends to increase competition among potential contractors because non-recurring costs such as special tooling and special test equipment, plant rearrangement costs, pre-production engineering cost, and specialized training can be amortized over a greater number of units, allowing contractors to compete for larger quantity lots. Long-term contracts allow prime contractors to promote more competition among their subcontracts. Long-term procurement promotes a stable work force, thereby, reducing acquisition cost to the Government by improving the fabrication, assembly, inspection and testing processes. It also reduces labor hours, minimizes spare parts and repair requirements, and improves the quality and the reliability of the product.[Ref. 11:p. 18-22]

2. Disadvantages

Long term procurement is not totally risk free. There are some drawbacks associated with using multiyear contracts for requirements. Large up front costs can impede the successful utilization of a multiyear contract. A multiyear contract cancellation ceiling liability may be considered a major drawback. Government buying activities may incur a huge termination obligation if funding is not approved for the subsequent (out) years. Contractors

may not recover all costs incurred, due to the cancellation ceiling or the costs incurred were not allowable. Competition may be restricted due to the loss of potential contractors when a long-term contract is awarded to one contractor. Long-term contracts decrease budget flexibility and cannot be changed or modified without significant costs associated.

G. CHAPTER SUMMARY

Procurement reform has been a major concern of the acquisition community for the last three decades. From the McNamara initiatives in the early 1960's to the recently passed FASA of 1994, Government has continually tried to reinvent itself. Reform initiatives have tried to make Government procurement activities more efficient buying organizations, getting the best value for the taxpayers dollars spent. One attempt to make procurement more efficient, is establishing long-term relationships with contractors for supplies and services. Multiyear contracting is a procurement method which attempts to achieve the efficiencies and cost savings which were mandated by various procurement reform legislation passed. This chapter further explains the multiyear contracting concept and delineates the objectives and criteria for its use.

III. SURVEY QUESTIONNAIRE AND DATA ANALYSIS

A. INTRODUCTION

In order to determine if multiyear contracting procedures were used to buy repair parts, the researcher developed a survey to assess the special contracting method, multiyear. The researcher reviewed existing pertinent literature relating to multiyear contracting to determine the previous use of multiyear contracting for buying pumps, valves, and compressors. The questionnaire survey intends to ascertain the present use of multiyear contracting for supplies and equipment, specifically pumps, valves, and compressors. Appendices (A) and (B) contain the complete survey questionnaire mailed to various DoD activities.

B. LIMITATIONS OF THE SURVEY QUESTIONNAIRE

The United States Government is one of the largest consumers of good and services produced in the economy. Among the sixty-four governmental executive departments and agencies, DoD has the largest expenditure of procurement dollars and the greatest amount of contract actions. This survey only examines a small aspect of the procurement process. The survey will only analyze long-term contracting methods and how they are utilized to buy spare parts. The research is further restricted to parts in Federal supply classification 4300 and 4800 series (valves, pumps and compressors), procured by the special contracting method of multiyear procurement. In fiscal year 1994, there were over 144,00 contract actions for supplies and equipment. Procurement of valves, pumps and compressors was approximately

one percent of the total contract actions, therefore, the area of research is very narrow. [Ref. 12:p. 8] The number of buying activities solicited were restricted to naval inventory control points and the Defense Logistics Agency (DLA) item manager for valves, pumps and compressors.

C. LONG-TERM CONTRACTING SURVEY

Since the scope of the research focuses only on a minute portion of government procurement, only major repair part stocking activities and major depot repair activities were surveyed. The surveys were distributed to the naval inventory control points and the Defense Logistics Agency item manager for pumps, valves, and compressors, and then later expanded to army maintenance depots. The researcher mailed surveys to 35 defense department agencies; the response rate was approximately forty-six percent. A cover letter was included in the questionnaire mailed to the various activities, Appendix (A). The purpose of the cover letter was to introduce the researcher to the questionnaire respondent, and to state why the questionnaire was written and what the research was attempting to accomplish.

The survey consists of four major sections, demographics/background, long-term or multiyear contract information, incentive arrangements, and long-term or multiyear contract effectiveness. Questions presented are followed by an analysis of the responses.

1. Acquisition Experience

The introductory part of the questionnaire survey was designed to obtain demographic information concerning the individuals who responded to the survey (e.g., name, office or

section, position, years in current position and years in the acquisition field). Among the respondents who answered the survey questionnaire, years of experience in the acquisition field ranged from 2 to 30 years and the average was approximately 16 years. The years of experience in the current positions ranged from 1 to 14 years, the average was approximately 5 years.

2. Confidentiality

Anonymity is afforded to all individuals who responded to the questionnaire. They did not have to be identified as sources of information for their organizations. Question two asked if the researcher may telephone the respondent for further questioning if necessary. All respondents to the questionnaire did not wish their answers to remain confidential and the researcher was free to call all respondents for additional inquiries if deemed necessary.

3. Organization's Business Activity

Question three asked each respondent to briefly describe their organization's primary business. The intent of the researcher was to focus on major naval supply activities, such as fleet industrial supply centers, inventory control points and defense supply activities which procured pumps, valves and compressors. Since the scope of the research was narrowly defined, the researcher expanded the questionnaire survey to include army maintenance depot activities. The researcher's intentions were to solicit responses from defense department activities whose functions were to (1) buy large quantities of supplies and equipment for stock at supply depots, specifically parts in the federal supply classification series 4300 and 4800

(pumps, valves, and compressors), (2) buy supplies and equipment for direct maintenance support of weapon systems used in the fleet, and (3) procure supplies and equipment in support of research and development of weapon systems.

The primary business of the organizations which responded to the survey were procuring requirements (spare parts and services)to support repairs to major weapon systems, support research and development of systems, and procuring requirements to satisfy stocking levels. The contracting actions can be defined within two categories, direct support purchases and inventory procurement.

4. Use of Long-term Procurement Methods

Question four asked if the organization used long-term contracts when purchasing parts. If the answer was "no", the researcher asked the respondent to briefly explain the reasons for not using long-term types of contracts. This question was used to determine if the activities surveyed utilized any long-term procurement method to purchase parts. If "yes" was the response, the survey would continue to define the type of long-term contracting used by the activity. If a long-term procurement method was not utilized, the researcher asked for a brief explanation. There are several factors mentioned in previously published literature as to why long-term or multiyear contracting was not used. The most stated factors were annual funding, the budgeting process, excessive congressional oversight, instability of the requirements, and large up front cost [Ref. 13:p. 10]. The question will attempt to determine if these factors still exist or if other barriers exist.

The response to the surveys indicates that 53% of the organizations did not use long-

term contracts to purchase spare parts. Reasons for not using long-term contracts were (1) the spare parts required are replacement for failed parts, usually one-time buys, (2) the activity did not buy parts from commercial activities, but used normal supply channels, (3) the organization only procured services or research and development, and (4) requirements are unknown.

5. Multiyear Contracting

Question five asks if the organization buys spare parts using the special long-term contracting method set forth in FAR subpart 17.1. There are many long-term or multiple year type contracting methods that provides the same or better benefits than a multiyear contract. The purpose of the question was to narrow the scope of the responses. If the response to the question was yes, the intent was to direct the remaining survey responses toward multiyear contracting only. A positive response would pertained to any multiyear contract currently held by the activity. If a negative response is received, the survey would pertain to any long-term contract held by the activity.

Less than five percent of the activities surveyed used multiyear contracting as set forth in FAR subpart 17.1. Only major commands within the defense department utilized multiyear contracting to procure spare parts. These activities procured replacement supply parts for one or more major weapon systems or their primary business is procurement of spare parts for major inventory stocking activities.

6. Multiyear Contracts for Valves, Pumps and Compressors

Question six asks if valves, pumps and compressors are purchased using the multiyear contracting method as stated in FAR subpart 17.1. This question restricts the scope of research to specific spare parts. The question was used to determine if buying activities used multiyear contracts to satisfy requirements for pumps, valves and compressors. Multiyear contracts were not used to buy pumps, valves and compressors. All respondents gave negative responses to the question.

7. Long-term Contract Volume

Questions seven through ten were used to analyze the volume of long-term contracts currently used by activities surveyed. A recent research thesis conducted on long-term contracting within the DoD indicated that approximately 58 percent of the dollar value of contracts for goods and services are of a long-term nature. And, on the average, approximately 47 percent of the number of contracts are of a long-term nature. However, the majority of items purchased using long-term procurement were for services; see Table 3.1, on page 29.[Ref 14: p. 55-58]

GOOD AND SERVICES CONTRACTED			
Supplies & Equipment		Services	
ADPE	4%	Engineering/technical	13%
Common supplies	15%	Facility services	22%
Construction contracts	4%	Logistic support	3%
Large & complex items	6%	Manufacturing services	0
MRO Goods	8%	Overhaul&Maintenance	14
Production material	0	Research & Development	7%
Raw material	1%	Transportation services	4%
Total	37%	Total	63%

Table 3.1 Percentage goods procured by long-term contracts

Table 3.2 gives a dollar value comparison; it shows the percentage dollar value of current long-term contracts, as a percentage of the total dollar value of all current contracts at the activities surveyed. Table 3.3 shows a comparison between long-term contracts and the total number of all contracts currently active within these activities. Table 3.4 displays the average length of the long-term contracts issued by the various commands surveyed. The data indicates that the use of long-term contracting by organizations is dependent on the type and volume of business activity supported. Long-term contracts were rarely used by organizations which supported the maintenance and repair of deployed weapon systems with a small population. Those depot repair and maintenance level activities' requirements are too small and unstable to make long-term contracting cost effective. However, long-term contracts were used by major inventory stocking activities for a wide variety of commonly used spares for numerous deployed weapon systems.

Dollar value of long-term contracts	
0	73%
less than 20%	7%
21 to 40 %	13%
41 to 60%	7%
61 to 80%	0
81 to 100%	0

Table 3.2 Percentage of long-term contracts by dollar

Number of long-term contracts	
0	73%
less than 20%	13%
21 to 40 %	7%
41 to 60%	0
61 to 80%	7%
81 to 100%	0

Table 3.3 Percentage of long-term contracts by number

Length of long-term contracts	
1 year or less	73%
>1 but <2 years	7%
>2 but <3 years	0
>3 but < 4 years	0
>4 but <5 years	13%
5 or more years	7%

Table 3.4 Average length of long-term contracts

8. Perspective Parts for Long-term Contracting

Many opportunities exist for buying activities to use long-term procurement methods to satisfy requirements. During fiscal year 1994, supplies and equipment accounted for more than 144,000 contract actions valued at about 62.8 billion dollars, see Appendix C. Question eleven asked survey respondents to list parts which they felt were excellent candidates for long-term or multiyear procurement. Responses received from activities which used long-term or multiyear contracting varied significantly. Organizations whose customer requirements were for small quantities and demand was unstable, did not recommend any type of spare parts for long-term procurement. Some reasons given were, the vendors are not sophisticated enough to prepare the multiyear proposal, customer unwillingness to obligate large up-front cancellation charges and the budget constraints of annual funding. Another recommendation suggested that all spare parts provided by sole source vendors could be procured using long-term or multiyear contracting. Use of a long-term type contracting method in this situation would reduce administrative costs and procurement action lead times,

thus improving customer service. The large buying activities screen all spare parts requirements for a possible long-term or multiyear type procurement. For example, Defense General Supply Center has an on-going initiative to put as many requirements on long-term type contracts as possible.

9. Contracts and Pricing Arrangements

Among the activities who responded to the survey questionnaire (46%), none used multiyear contracts to buy any type of spares. However, many activities used long-term procurement methods to satisfy spare parts requirements. Contract types used by the buying activities includes:

1. Indefinite delivery contracts (IDC), used when the exact times and/or quantities of future deliveries are not known.

2. Definite quantity contracts (DQC), a type of IDC, used when the precise requirements are known, but delivery dates are not known.

3. Requirements Contract (RTC), a type of IDC, used when requirements are estimated. The funds are obligated upon each delivery order and all requirements generated within the contract ordering period must go to the awardee.

4. Indefinite quantity contracts (IQC), a type of IDC, used when requirements are estimated with a minimum guaranteed quantity. The funds are obligated for the minimum quantity upon execution of the contract.

5. Firm fixed-price contracts, used when requirements are known, price and delivery is definite.

6. Cost-type contracts, used for requirements on repair and production lines, actual allowable costs are reimbursed.

All of the above mentioned contract types are routinely used in single year procurements. However, the use of options makes the contracts long-term in nature.

10. Incentives

Questions thirteen, fourteen and fifteen were used to determine if incentives were used to entice vendors into long-term arrangements or if vendors sought additional incentives for long-term agreements. Previously published literature on multiyear procurements of major weapon systems stated that in most instances incentives were not necessary with the multiple year contracts. Contracts for multiple years are considered a win-win situation for the buyer and seller. The buyer obtains cost savings from reduced contract administration, economic order quantities, and inflation avoidance. The sellers gain stability in their production and work force, reduced cost of production materials and improved scheduling and utilization of production capacity. [Ref. 15]

Among the respondents who used a multiyear or long-term contracting arrangement, practically all did not use any type of special incentive to entice contractors into long-term agreements. The respondents stated that the level of competition within the spare parts industry and the shrinking volume of defense contracts were enough motivation for contractors to seek long-term agreements. Although buying activities did not offer incentives in most cases, some common incentives were requested and granted in numerous situations. The most often mentioned incentives that were used by the respondents are progress

payments and economic price adjustments (EPA). Progress payments were usually granted for large dollar value contracts and contracts awarded to small businesses. EPA's are often used to protect contractors from severe fluctuations in production materials and business volume. For example, if a spare part requires the use of precious metals in the manufacturing process, the contractor may ask for an EPA to cover the long term risk of price fluctuations.

Although multiyear contracting (as defined in FAR subpart 17.1) is rarely used by procuring organizations, requirements are satisfied for long time periods. Contracting officers achieved long-term commitments by awarding annual contracts with options for the out years. Cost savings may decrease due to additional administrative costs associated with negotiating options in subsequent years. However, additional benefits of multiyear contracting such as continuity of production, stabilization of the contractor's work force and avoidance of new contractor certification are achieved by using the annual contracts with options.

11. Barriers to Long-term Contracting

Questions sixteen and seventeen were used by the researcher to determine which barriers existed in long-term procurement of spare parts. And if the barriers exist for long-term procurement, the survey attempts to determine if contracting agencies preferred increasing or decreasing the use of long-term procurement for future spare parts buys. Barriers which limit the use of multiyear or long-term contracting for major weapon systems are well documented. As noted in a recent thesis survey conducted by a student at the Naval Postgraduate School, he stated that procurement policies and regulations concerning

competition and budgeting often impeded the contracting officer's ability to use a long-term contract. [Ref. 14:p. 41] Also, a survey response concerning barriers to long-term procurement by DoD personnel cited many barriers which discourage the use of long-term contracting. The primary barriers cited were changing requirements, the Competition in Contracting Act, single year budgeting and other factors. The other factors which impeded the use of long-term contracting were (1) difficulty in administering, (2) alienation of the losing contractors, (3) frequent price changes, (4) customer resistance, (5) frequent changes in states of technology, (6) lack of authority to use multiyear contracting, (7) dollar authority thresholds, (8) cost and pricing requirements, and (9) resistance by the small business community.[Ref. 14:p. 68] The requirements for competition, single year funding, cancellation ceilings and approval requirements are noted barriers which have diminished the use of long-term or multiyear contracting since its inception.

The response to the survey indicates that the same barriers are still in existence when seeking long-term contracting opportunities for spare parts requirements. Most of the previously stated factors were given as barriers to long-term contracting. However, an additional barrier was noted in which the researcher did not find documented in prior literature read. Some respondents stated that a lack of customer awareness or education on multiyear/long-term contracting was a barrier encountered by their organizations. The respondents recommended educating the requiring customers through the use of guides and training sessions as a means of reducing barriers and encouraging the use of multiyear procurement.

A majority of the respondents recommended using long-term or multiyear contracts

more often. The most often cited response was long-term contracts reduced the procurement administrative lead time (PALT). Also, an increase in long-term contracting for spare parts would improve program stability.

There was one negative response regarding increased usage of long-term procurement for spare parts. The respondent stated that multiyear procurement was applicable for major weapon systems acquisitions but not necessarily suited for field contracting.

12. Successful Long-term Factors

Question eighteen was designed to determine the characteristics of successful contracts negotiated by the organizations surveyed. Many characteristics were identified as important factors for successful long-term procurement in a previous thesis by a Naval Postgraduate School student. Characteristics mentioned by both contractor and DoD personnel were (1) close, cooperative relationships with suppliers, (2) early supplier involvement, (3) requirements clearly defined and a concise statement of work, (4) proactive contract administration, (5) choosing the right supplier, (6) accurate requirements forecast, (7) use of best value criteria in source selection, (8) use of options, and (9) use of electronic data interchange when placing orders against long-term contracts [Ref. 14:p. 72]. Factors for successful long-term procurement as stated by the respondents were similar to the documented characteristics. For example, one respondent issued a successful long-term contract for cargo tie down straps for the nuclear program. The key factors pertinent to success in this particular situation were (1) a close relationship to suppliers, only a small number of qualified sources, (2) requirements were clearly defined because the straps were

part of the nuclear reactor program, and (3) the requirements' forecast was accurate because backorders were over 55,000 and current demands were high. Other successful characteristics noted by respondents were best value, a clearly defined statement of work and measurable evaluation factors. They prevented protests of awards by the losing contractors.

D. CHAPTER SUMMARY

The total amount spent for goods and services by DoD activities in fiscal year 1994 was approximately 132 billion dollars, about 48% of the total defense budget. Among the sixty-four departments and agencies in the executive branch, the defense department has the largest expenditure for good and services and the highest number of individual contract actions among the various federal agencies. In this chapter, a survey questionnaire was developed to determine if organizations use the special type of long-term procurement method of multiyear contracting. Since DoD purchases numerous types of supplies and equipment annually, the scope of the research and survey was restricted to an analysis of multiyear contracting for pumps, valves and compressors.

The results of the survey and telephone inquiries were discussed in this chapter. The research findings indicate that multiyear contracts are rarely used to purchase repair or spare parts to satisfy customers' requirements. And for those activities which did have multiyear contracts for parts, pumps, valves and compressors were not purchased using them. Although multiyear contracts were not used to achieve a long-term commitment with vendors, other contracting methods were routinely utilized to accomplish long-term contracts with vendors. Many buying activities used annual contracts, such as indefinite delivery

contracts with options to achieve a long-term relationship with their suppliers.

The survey also revealed that many users and spare parts suppliers were unaware of and not educated about multiyear contracting. Also, highlighted was customers' unwillingness to use multiyear procurement's due to cancellation of funding and budget constraints. Finally, the use of long-term contracts depended directly on the type and level of business activity. For example, contracting organizations whose customers' requirements were for the replacement of failed parts, small quantities, or unstable demands, did not use many long-term contracts. On the other hand, activities whose customers were numerous and quantities required were large, such as inventory stocking activities, used long-term commitments at every opportunity.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. INTRODUCTION

The purpose of this research was to analyze the use of multiyear contracting for procuring non-major weapons systems, such as spare parts and components. The primary focus of the research was limited to analyzing the use of multi-year contracts for valves, pumps and compressors. If multiyear contracting, which is a special method of long-term procurement, was rarely or never used to buy spare parts, the researcher wanted to determine if any types of long-term contracting methods were use to purchase spare parts for direct customer use or for inventory. Therefore, the secondary purpose of the study was to ascertain what types of long-term contracting procedures were used to purchase spare parts.

B. CONCLUSIONS

1. Conclusion 1

Repair parts are routinely purchased buy systems commands as advance acquisition procurements in support of major weapon systems procurement. However, the use of multiyear contracting (per FAR subpart 17.1) for purchasing valves, pumps and compressors is rare or non-existent. Many activities queried by telephone or through survey indicated that multiyear contracts had limited or no use by their organizations. If activities used multiyear contracts, they were generally used to procure services such as facility management and maintenance, engineering, equipment maintenance, and ADP equipment maintenance and

support. Although multiyear contracting was not used, many activities did use some form of long-term procurement to meet customers' requirements if the situation warranted its use.

2. Conclusion 2

Since activities did not use multiyear contracts as a long-term procurement method, many utilized different contracting arrangements to achieve long-term relationships with suppliers and to realize the associated cost savings of long-term contracts. Many organizations achieved long-term or multiple year contracts by negotiating annual contracts and using options for the additional years (up to four additional years), see Appendix D for further explanation of options. The contract type used most often by the procuring activity was the indefinite-delivery contract (IDC). IDCs were used because of budgetary constraints, large up front costs and the potential cancellation charges were not acceptable to the requiring customers. Many customers were not willing to accept the additional risk and costs associated with establishing multiyear contracts.

3. Conclusion 3

The level of knowledge about multiyear contracting is minimal among field level contracting activities, their customers and some vendors which sell parts to the Government. Through numerous surveys and telephone inquiries, many believed that an annual contract with options was the same as a multiyear contract. There are distinct differences between annual and multiyear contracts. Additional procedures must be implemented to have a true multiyear contract. Some additional requirements are (1) no-year or multiyear funds must be

available, or in the case of 1-year funds an agency must have specific authorization by statute, (2) the contracting officer must issue both a multiyear and a single year solicitation for the first year, (3) there must be a computation of estimated savings between multiyear and annual contracts, and (4) a determination of cancellation cost for each year of the contract and its up front funding. These additional requirements, coupled with annual budgets and minimum quantity requirements seem to discourage many requiring customers and field level Government contracting officers to pursue multiyear contracting as a means to satisfy long-term requirements. However, there seems to be an abundance of knowledge pertaining to multiyear contracting among the larger contracting activities and major defense contractors because of its use when purchasing major weapon systems and their associated hardware.

C. RECOMMENDATIONS

1. Central Funding of Cancellation Charges

A major barrier to multiyear contracting for non-major weapon systems is the customer's reluctance to obligate funds for potential cancellations. A cancellation pool funded by the systems command (SYSCOM) would alleviate the potential for additional charges against the user activity's budget. Since cancellation of multiyear contracts are seldom, less than 14%, the SYSCOM can assume the additional burden with a minimum impact on its budget. [Ref. 7] For example, a SYSCOM would establish a cancellation pool for a major weapon system which has been approved for multiyear procurement by Congress. The cancellation pool would be funded for the entire expected life of the system by the

SYSCOM. Once the system has reached the material support date, the users can initiate multiyear procurement for replacement parts, only obligating funds for the actual cost of the required parts.

2. Increase Awareness/Education on Multiyear Contracting

The head of contracting activities should publicize and market multiyear contracting and other types of long-term procurement methods. The current environment in DoD readily lends itself toward the use of multiyear contracts. Such factors as (1) reduced in funding and personnel within DoD, (2) decreased procurement of new weapon systems, (3) reduced inventories, (4) a shift toward commercial practices by Government acquisition personnel, and (5) the demand for cost savings initiated by various procurement reform legislation, makes multiyear contracting a good solution to the existing conditions in today's procurement environment.

3. Relax Annual Budget Regulations

The current regulations do not permit using annual funds in out-years; they are only to be used in the fiscal year in which the funds were authorized and appropriated. This provision prevents many users from considering multiyear contracts because of the difficulties involved in obtaining an approval for no-year or multiyear funds. Documentation of a National Performance Review discussion on "Reinventing Federal Procurement" provides an excellent argument for relaxing the annual budget requirement to increase the usage of multiyear contracts. The key points are highlighted in the following paragraph:

> Most federal agencies operate with annual appropriations. This limits their ability to contract for periods that extend beyond the end of the fiscal year. The lack of authority to cross fiscal years creates uncertainty as to whether a contractor and its services will be available to agencies after September 30, and imposes additional paperwork burdens on contracting personnel. There are circumstances where contracting for more than one year would reduce the overall cost of acquiring supplies and services. The use of multiyear contracts provides contractors with a guarantee of work over a period of years, lowers risk, and as a result produces lower contract prices. It would also provide agencies with a smaller number of contract actions and reduce the workload associated with exercising contract options. Special legislative authority to conduct multiyear procurement has been given to some agencies for selected programs. However, the authority is limited....
>
> ....The DoD has multiyear contracting authority and multiyear funding authority for many of its weapons programs. The authority enables defense contractors to spread their cost over a larger production base, thus reducing the cost per item....
>
> ....The inability to award multiyear contracts causes a major paperwork burden that increases federal administrative costs. At the end of each fiscal year, contracting officials must modify every federal contract funded with annual funds to add funding for the new contract period. This exercise is costly and unnecessary and is exacerbated when Congress fails to pass appropriations bills before the start of the fiscal year. In such cases, a notice must be sent to every one of the contractors each time there is a continuing resolution, even if the resolution is only for a few days, as has often been the case....[Ref. 16]

4. Improving Future Requirement Projections

One of the criteria required for the effective use of a multiyear contract is a stability of requirement. The requiring activities must accurately predict future requirements of items which are to remain unchanged or change very slightly. In the survey, many contracting activities stated that smaller vendors and users were not able to accurately predict future requirements. DoD contracting activities should liaison with user customers and spare parts

vendors to develop long-term purchasing plans for common requirements which are used by a majority of the customers.

5. Develop a Screening Process for Long-term Procurement Candidates

Contracting agencies should develop lists and procedures which will aid users in planning for recurring requirements. A checklist developed for possible candidates for multiyear contracting will increase the awareness and knowledge of user activities and market the benefits and cost savings achieved by using multiyear procurement. Appendix E provides an example of a checklist used by Defense General Supply Center to screen requirements for long-term contracting opportunities.

D. ANSWERS TO RESEARCH QUESTIONS

1. Primary Research Question

What is the best way to apply multiyear contracting procedures for procuring non-major weapon systems, in particular valves, pumps and compressors? Currently, FAR has established procedures for procuring supplies and equipment (non-major weapon system) on a long-term basis. The multiyear contracting procedures established for buying major weapon systems are exactly the same for purchasing supplies, equipment and services. However, there is an enormous difference in the products which are classified as a major versus a non-major weapon system.

Two dollar amount thresholds pertain to any procurement which will classify

programs/products as a major weapon system:

1) Total research, development, test and evaluation costs exceed $75 million.

2) Total procurement exceeds $300 million.

Both dollar values are base on fiscal year 1980 constant dollars [Ref. 17:p. 3]. Non-major systems, such as valves, pumps and compressors are all other items which do not meet the dollar value threshold.

FAR lists five criteria that must be met when evaluating programs/products as candidates for multiyear contracting. But, when purchasing supplies such as valves, pumps and compressors, some criteria for multiyear contracting may be difficult to meet. Stable quantities and funding may be an obstruction for the successful use of multiyear contracting procedures. Quantities may cause problems because requirements are demand driven and many times are unpredictable. Funding can be unstable because of the annual budget requirements.

Multiyear contracting procedures currently established are accommodating some long-term procurement of supplies and equipment. A revision of the evaluation criteria for the stability of funding and requirements may increase the use of multiyear contracting as a long-term procurement strategy.

2. Subsidiary Research Question 1

To what extent is multiyear contracting used for purchasing supplies and services at buying activities that require valves, pumps and compressors? None of the organizations surveyed used multiyear contracts to procure valves, pumps or compressors.

3. Subsidiary Research Question 2

What are the problems associated with utilizing a multiyear contracting technique for non-major weapon systems procurement? Many of the problems associated with multiyear contracting for major weapon systems are the same as multiyear procurement for supplies and equipment. Annual budget restrictions, large up front costs, cancellation liability, and lack of awareness/education of multiyear contracting by the requiring activity contributes to the limited use of multiyear contracts for non-major weapon systems.

4. Subsidiary Research Question 3

If multiyear contracting techniques are currently being used for procurement of supplies and services, what is the extent of its use? Multiyear contracts were seldom used to procure supplies and equipment, however, it was routinely used to procure various services.

5. Subsidiary Research Question 4

Do better alternatives exist for procuring supplies and services for long-term requirements? Contracting activities are using alternatives to achieve long-term contracting objectives. Many of the activities use annual contracts with options to establish a long-term relationship with the vendors. Government contractors use this method because (1) it does not require the approval level of multiyear contracts, (2) practically all of their customers only have annual funds, it's too difficult to get no-year or multiple year funds, and (3) obligation of cancellation charges is not required. However, the use of options is not the optimal method for long-term contracting. Options still require annual contract administration costs.

Also, contractors may be restricted on cost reduction because a contract with options is not guaranteed.

E. AREAS FOR FURTHER RESEARCH

Areas that merit consideration for further study include (1) establishing an education/training program for multiyear/long-term procurement methods, (2) developing guidance that establishes the type and kind of supplies which multiyear/long-term methods would be the most efficient and cost effective procurement vehicle, (3) studying possible solutions to barriers of multiyear contracting, such as annual budgets and cancellation obligations, and (4) developing specific procedures for long-term procurement of non-major weapon systems.

APPENDIX A. INTRODUCTION LETTER

LT Cary Johnson
Naval Postgraduate School
Code: SGC 2396
Monterey, CA. 93943
Fax: (408) 656-2138
DSN 878-2138

Sir / Madam:

This is a letter of introduction and a request for assistance in a Master's Thesis research project on multiyear contracting.

My name is Cary Johnson and I am an active duty Naval Officer in the U. S. Navy Supply Corps and currently a student at the Naval Postgraduate School where I am working towards a M. S. in Acquisition and Contract Management.

My Master's Thesis research will focus on the use of multiyear contracting for procuring spare parts. Specifically, my research goal is to determine to what extent is multiyear contracting used for procuring spare parts by DoD buying organizations. for the purpose of this thesis, multiyear contracts are consider to be a special contracting method as established by Federal Acquisition Regulations subpart 17.1. Multiyear contracts are long-term procurement contracts which are written to establish a buyer/seller relationship longer than traditionally expected (greater than one year) in a normal competitive environment.

I request that you take a few minutes to complete the enclosed survey and return it at your earliest convenience. If you are unable to answer this survey, please pass it on to someone who is. All of your responses will remain strictly confidential if you so choose. The survey results will be used for academic research analysis on multiyear contracting for spare parts and components. I want to thank you in advance for your assistance.

Sincerely,

Cary Johnson
LT, SC, USN

APPENDIX B. LONG-TERM SURVEY

LT Cary Johnson
Naval Postgraduate School
Code: SGC 2396
Monterey, CA 93943

Survey of Long-term Contracting for Spare Parts

This survey is designed to solicit information on your use of long term contracts. The goal is to determine the use of long term contracts for procuring spare parts within DoD buying activities. For the purpose of this survey, part / spare part is defined as a repairable or consumable, purchased after provisioning of that part and used for replacement, replenishment of stock, or used in the maintenance, overhaul, and repair of equipment. Please take a few minutes to answer the survey questions. I would also appreciate a copy of any instructions, models, or guidance your organization has concerning long-term (or multiyear) contracting. Thank you for your assistance.

Date:
Name of your Command or Activity:
Your name (optional):
Your office or section:
Your position:
Number of years in your current position:
Number of years you have worked in the acquisition field:
Telephone number:

==========

1) Do you wish your answers to remain confidential? Yes No

2) May I call you if I have questions? Yes No

3) Briefly describe your organization's primary business:

_____

_____

_____

4) Does your organization use long-term contracts when purchasing parts?
Yes No If you answer no, briefly describe why not?

_____

_____

_____

_____

_____

IF YOU ANSWERED NO TO QUESTION 4, PLEASE STOP AND RETURN SURVEY. YOU MAY MAIL IN ENVELOPE PROVIDED OR FAX THE RESPONSES. THANK YOU FOR YOUR ASSISTANCE.

If your answer to question 4 is yes, please continue.

5) Are parts or components procured in accordance with multiyear contracting procedures set forth in Federal Acquisition Regulations subpart 17.1 (special contracting methods)? Yes No

If yes, answer remaining questions as applicable to multiyear contracts.

6) Are pumps, compressors, or valves (Federal Supply Class 4300 or 4800 series) procured by multiyear contracts (FAR subpart 17.1)? Yes No

If yes, answer remaining questions as applicable to procuring pumps, valves, and compressors by multiyear contracts.

7) What percent of the dollar value of your contracts for the procurement of goods and services are of a long-term nature?

a. 0 to 20% b. 21 to 40% c. 41 to 60%
d. 61 to 80% e. 81 to 100%

8) What percent of the number of your contracts for the procurement of goods and services are of a long-term nature?

a. 0 to 20% b. 21 to 40% c. 41 to 60%
d. 61 to 80% e. 81 to 100%

9) What is the average length of your long-term contracts?

a. > 1 but < 2 years b. > 2 but < 3 years c. > 3 but < 4 years
d. > 4 but < 5 years e. 5 years or more

10) What types of spare parts are you currently contracting for on a long-term (multiyear) basis and why?

_____

_____

_____

_____

_____

_____

11) What types of spare parts would you like to see contracted for on a long-term (multiyear) basis and why?

_____

_____

_____

_____

_____

_____

12) What types of contracts and pricing arrangements are you currently using on your long-term (multiyear) contracts (e.g., FFP, FPIF, CPIF, IDCs, etc.) and why? In addition, are you using options?

13) What types of incentives do you offer your suppliers to accept long-term (multiyear) contracts (e.g., cost, technical, performance, delivery, other) and why?

14) What types of incentives do your suppliers ask for with long-term (multiyear) contracts and why?

15) Do you use any unique contracting arrangements (e.g., hybrid contracts), special contracting methods, or special clauses to reduce risk (e.g., EPAs) with long-term contracts? Yes No

If yes, briefly describe what they are.

_____

_____

_____

_____

_____

_____

16) Do you face any barriers when using long-term (multiyear) contracts to procure parts? Yes No

If yes, briefly describe what they are and what actions you are taking to reduce these barriers?

_____

_____

_____

_____

_____

_____

17) Would you like to see long-term (multiyear) contracts used more often?
Yes No If yes, briefly describe why?

_____

_____

_____

_____

_____

18) Please briefly describe your most successful long-term (multiyear) contract and what made it so successful?

_____

_____

_____

_____

_____

19) Please comment on any aspect of long-term (multiyear) contracting for parts that you feel was not adequately covered.

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THIS IS THE END OF THE SURVEY. THANK YOU FOR YOUR TIME AND EFFORT. PLEASE MAIL SURVEY IN THE ENVELOPE PROVIDED OR FAX TO THE NUMBER PROVIDED.

APPENDIX C. SUPPLY & EQUIPMENT CONTRACT SUMMARY

FEDERAL PROCUREMENT DATA SYSTEM
SUPPLIES AND EQUIPMENT - SUMMARY BY FSC GROUP
Actions Reported Individually on SF279
Fiscal Year 1994 Through Fourth Quarter

		Number of Actions	Dollars(000)
TOTAL FEDERAL SUPPLIES AND EQUIPMENT		144,350	62,853,157
10	Weapons	781	743,934
11	Nuclear Ordnance	36	-5,417
12	Fire Control Equipment	650	514,563
13	Ammunition and Explosive	1,486	1,350,520
14	Guided Missiles	1,316	4,568,766
15	Aircraft and Airframe Structural Component	2,604	13,219,723
16	Aircraft Component and Accessories	2,902	1,224,813
17	Aircraft Launch, Land, and Grd Hdl Equip	354	87,519
18	Space Vehicles	311	1,308,621
19	Ships, Small Craft, Pontoons and Floating Docks	1,678	3,522,765
20	Ship and Marine Equip	533	149,751
22	Railway Equipment	26	31,333
23	Gnd Effect&Motor Vhcl, Trailers, & Cycles	962	2,385,273
20	Tractors	122	34,214
25	Vehicular Equip Components	1,097	358,036
26	Tires and Tubes	283	34,407
28	Engines, Turbines, and Components	2,737	3,445,048
29	Engine Accessories	1,050	175,629
30	Mechanical Power Transmission Equipment	539	61,291
31	Bearings	462	52,432
32	Woodworking Machinery and Equipment	12	1,563
34	Metalworking Machinery	374	62,744
35	Service and Trade Equipment	245	15,919
36	Special Industry Machinery	1,390	221,890
37	Agricultural Mach and Equip	144	7,187
38	Constr, Mine,Excavate, & Hwy Maint Equipment	497	124,261

FEDERAL PROCUREMENT DATA SYSTEM
SUPPLIES AND EQUIPMENT - SUMMARY BY FSC GROUP
Actions Reported Individually on SF279
Fiscal Year 1994 Through Fourth Quarter

		Number of Actions	Dollars (000)
49	Materials and Handling Equipment	860	233,433
48	Rope, Cable, Chain and Fittings	182	12,984
41	Refrigeration, AC and Air Circulating Equipment	860	97,293
42	Fire Fighting, Rescue, and Safety Equipment	489	134,412
43	Pumps and Compressors	360	85,842
44	Furnace, Steam Plant,and Drying Equip	427	327,882
45	Plumbing, Heating, and Sanitation Equipment	191	18,995
48	Water Purification and Sewage Treatment Equip.	114	27,965
47	Pipe, Tubing, Hose and Fittings	708	60,438
48	Valves	895	79,989
49	Maintenance and Repair Shop Equipment	1,060	361,589
51	Hand Tools	966	59,816
52	Measuring Tools	88	9,152
53	Hardware and Abrasives	1,060	131,730
54	Prefabricated Structures and Scaffolding	708	131,122
53	Lumber, Millwork, Plywood and Veneer	792	27,618
56	Construction and Building Materials	747	81,916
58	Communications, Detection & Radiation Equip	8,454	5,576,759
59	Electrical & Electronic Equipment Components	5,088	1,100,265
60	Fiber Optics Mat, Components,Assem. & Acc.	320	63,765
61	Electric Wire, and Power & Distribution Equip.	2,726	606,755
62	Lighting Fixture and Lamps	429	34,733
63	Alarm, Signal, and Security Detection System	489	38,316
65	Medical, Dental, and Vet Equip and Supplies	10,713	1,092,221
66	Instruments and Laboratory Equipment	5,366	943,613
67	Photographic Equipment	966	59,816
69	Chemicals and Chemical Products	1,616	284,800
69	Training Aids and Devices	640	650,284
70	General Purpose ADP Equipment	29,743	4,263,094
71	Furniture	7,789	441,086
72	Household & Commercial Furn and Appliances	1,415	53,740

FEDERAL PROCUREMENT DATA SYSTEM
SUPPLIES AND EQUIPMENT - SUMMARY BY FSC GROUP
Actions Reported Individually on SF279
Fiscal Year 1994 Through Fourth Quarter

		Number of Actions	Dollars (000)
73	Food Preparation and Serving Equipment	698	30,206
74	Office Machines, Text Process System & Vis Rec	552	35,968
75	Office Supplies and Devices	4,284	159,134
76	Books, Maps and Other Publications	993	239,560
77	Musical Instr, Phonograph, and Hometype Radios	41	1,799
78	Recreational and Athletic Equipment	222	10,956
79	Cleaning Equipment and Supplies	730	35,968
80	Brushes, Paints, Sealers and Adhesives	790	23,865
81	Containers, Packaging and Packing Supplies	2,546	174,014
83	Textiles, Leather, Furs, Apparel, Tents&Flags	737	188,876
84	Clothing, Ind Equipment, and Insignia	1,241	531,726
85	Toiletries	704	52,320
87	Agricultural Supplies	343	16,686
88	Live Animals	26	4,795
89	Subsistence	14,429	3,063,432
91	Fuels, Lubricants, Oils, and Waxes	1,809	4,741,198
93	Nonmetallic Fabricated Materials	767	113,126
94	Nonmetallic Crude Materials	217	466,997
95	Metal Bars, Sheets and Shapes	763	126,567
96	Ores, Minerals and their primary products	239	223,570
99	Miscellaneous	3,293	1,823,951
E	Purchase of Structures and Facilities	15	3,767

APPENDIX D. CONTRACT OPTION

OPTIONS (FAR Subpart 17.2)...

Definition:

Unilateral right in a contract by which, for a specified time, the Government may elect to purchase additional supplies or services called for by the contract, or may elect to extend the term of the contract.

Use of Options:

Contracting officers may include options in contracts when it is the Government interest. However, an option is not considered in the best interest of the Government when the foreseeable requirements involves (1) minimum economic quantities, (2) the delivery requirement is far enough into the future to permit competitive acquisition, or (3) an indefinite contract or requirement contract would be more appropriate than a contract with options.

Option Contracts:

When using option contracts, the contracting officer should verify the following, if applicable to the contract:

(a) Contract specify limits on the purchase of additional supplies and services, or duration, including extensions.

(b) Contract state period within which the option must be exercised.

(c) Period set to provide the contractor adequate lead time to ensure continuous production.

(d) Period may extend beyond completion date for service contracts.

(e) The total of the basic and option quantities should not exceed the requirement for 5 years, unless otherwise approved.

(f) Contracts may express options for increased quantities of supplies in terms of (1) percentage of specific line items, (2) increase in specific line items, (3) additional numbered line item as identified by the option.

(g) Contracts may express extensions of the terms of the contract.

Exercise of options:

(a) The contracting officer provide written notice to the contractor within the time period specified.

(b) When the contact provides for economic price adjustments and the contractor request a revision of price, the contracting officer must consider the effect of the adjustment on prices under the option before the option is exercised.

(c) Exercise the option only after determining -

(1) Funds availability.
(2) Requirement fulfills existing government need.
(3) Exercising the option is most advantageous to the government.
(4) Option synopsize in accordance with Part 5 unless exempted.

(d) After considering price and other factors, contracting officer makes a determination on the basis of one of the following:

(1) A new solicitation fail to produce a better price or more advantageous offer than the option.
(2) An informal analysis of prices or and examination of the market indicates that the option price is better than market or the option is the more advantageous offer.
(3) The time between the award of the contract containing the option and the exercise of the option is so short that it indicate the option price is the lowest price obtainable or the more advantageous offer.

(e) Other factors should take into account the Government's need for continuity of operations and potential costs of disrupting operations.

(f) Before exercising the option, the contracting officer should make a written determination for the contract file that exercise is in accordance with the terms of the option. Must satisfy requirement of Part 6, full and open competition, the option must have been evaluated as part of the initial competition and be exercisable at an amount specified in or reasonably determinable from the terms of the basic contract.

(g) The contract modification or other written document which notifies the contractor of the exercise of the option should cite the option clause as authority.

APPENDIX E. LONG-TERM DECISION MATRIX

LONG-TERM CONTRACTING DECISION MATRIX

Items selected for a long-term contracting arrangement must generally meet all the following criteria:

1. Have wide commercial application and usually acceptable in their commercial domestic/export preservation and packaging; however, depending upon the merits of the case, the lack of wide commercial application will not necessarily bar consideration of an item for an IDC.

2. Have a projected steady or continuous demand rate during the life of the contract; i.e., fluctuations should no exceed plus (+) or minus (-) 35% of the indicated estimated annual requirement.

3. Have a relatively short Production Lead-Time (PLT), generally not exceeding 90 days PLT; however, where 90 days is restrictive and there are other valid reasons for entering into an IDC, the 90 day PLT limit may be exceeded.

4. Be purchased using large purchase procedures. Consider grouping items which individually have less than $25,000 annual demand if the items are identified to the same manufacturer and the group of items exceeds $25,000 annually.

5. Be inspected at Destination.

6. Be packaged according to commercial standards when direct vendor delivery is used.

7. Can be covered by a Federal Supply Schedule.

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